

WHAT IS CLAIMED IS:

- 1 1. A liquid crystal display device comprising:
2 a pair of substrates,
3 a liquid crystal layer interposed between said pair of substrates,
4 a wiring having a stacked structure layer formed on one of said pair of
5 substrates,
6 a transparent conductive film formed over said wiring,
7 said wiring includes a first layer of aluminum or an alloy comprising
8 essentially of aluminum, and at least a second layer of material selected from the
9 group including of molybdenum, aluminum, chromium, tungsten, silver, and copper.
- 1 2. The liquid crystal display device according to claim 1 wherein
2 said second layer is formed on said first layer.
- 1 3. The liquid crystal display device according to claim 1 wherein
2 said transparent conductive film includes at least one of: ITO, IZO and IGO.
- 1 4. The liquid crystal display device according to claim 1 further
2 including a plurality of pixel parts being constructed with a plurality of gate lines and
3 a plurality of drain lines arranged in a matrix on one of said pair of substrates, and a
4 switching element being provided in each of said pixel parts,
5 wherein one of said plurality of drain lines comprises said wiring.
- 1 5. The liquid crystal display device according to claim 1 further
2 including a plurality of pixel parts being constructed with a plurality of gate lines and
3 a plurality of drain lines arranged in a matrix on one of said pair of substrates, and a
4 switching element being provided in each of said pixel parts,
5 wherein one of said plurality of gate lines comprises said wiring .
- 1 6. The liquid crystal display device according to claim 5 wherein
2 said plurality of gate lines are formed along a first direction in one of said pair of
3 substrates, said plurality of drain lines formed along a second direction in one of said
4 pair of substrates, a plurality of counter voltage signal lines formed along the first
5 direction in one of said pair of substrates,

6 wherein said one of plurality of counter voltage signal lines comprises
7 said wiring.

1 7. The liquid crystal display device according to claim 6 further
2 including a counter electrode disposed in said pixel part and connected with said one
3 of plurality of counter voltage signal lines, said counter electrode having a rectilinear
4 shape or a comb shape.

1 9. The liquid crystal display device according to claim 7 further
2 including a comb-shape pixel electrode disposed in said pixel part and connected with
3 said switching element.

1 10. The liquid crystal display device according to claim 9 further
2 including an insulation layer, wherein said counter electrode is formed on one of said
3 pair of electrodes, said insulating layer is formed over said counter electrode, said
4 pixel electrode is formed on said insulating layer.

1 11. The liquid crystal display device according to claim 9 further
2 including a scan signal applied through one of said plurality of gate lines to said
3 switching element, a video signal is applied through one of said plurality of drain
4 lines and said switching element to said pixel electrode, said switching element
5 formed proximate to a crossing point between said one of said of drain lines and said
6 one of said gate lines.

1 12. The liquid crystal display device according to claim 9 wherein
2 said pixel electrode has a zigzag-shaped structure.

1 13. The liquid crystal display device according to claim 9 wherein
2 said pixel electrode has a comb-shaped structure.

1 14. The liquid crystal display device according to claim 13 further
2 including an insulation layer and an organic layer, wherein said counter electrode is
3 formed on one of said pair of electrodes, said insulating layer is formed over said
4 counter electrode, said organic layer is formed over said insulating layer, said pixel
5 electrode is formed on said organic layer.

1 15. A liquid crystal display device comprising:

2 a pair of substrates,
3 a liquid crystal layer interposed between said pair of substrates,
4 drain lines and gate lines formed on one of said pair of substrates and
5 crossing each other in a matrix form,
6 counter voltage lines formed on one of said pair of substrates and being
7 disposed between said gate lines,
8 wherein at least one of said drain lines, said gate lines and said counter
9 voltage lines includes a multi-layered structure covered with a transparent conductive
10 film, said multi-layered structure comprising an aluminum layer or an alloy layer
11 comprising essentially of aluminum and a high-melting point metal layer, said
12 transparent conductive film including one of ITO, IZO and IGO.

1 16. The liquid crystal display device according to claim 15 further
2 including a pixel electrode formed on one of said pair of substrates and having a
3 comb-shaped structure, and a switching element formed proximate to a crossing point
4 between said at least one of said drain lines and said gate lines and connected with
5 said pixel electrode.

1 17. The liquid crystal display device according to claim 16 further
2 including a sheet of counter electrode disposed on one of said pair of substrates in
3 opposed relation to said pixel electrode and connected with one of said counter
4 voltage lines.

1 18. The liquid crystal display device according to claim 16 further
2 including a comb-shaped counter electrode disposed on one of said pair of substrates
3 in opposed relation to said pixel electrode and connected with one of said counter
4 voltage lines.

1 19. A liquid crystal display device comprising:
2 a pair of substrates,
3 a liquid crystal layer interposed therebetween,
4 a thin film transistor having a gate electrode, a source electrode and a
5 drain electrode formed on one of said pair of substrates;
6 a gate line connected to said gate electrode,
7 a drain line connected to said drain electrode,

8 a pixel electrode connected to said source electrode and having an
9 approximately slit shape structure,
10 a counter electrode being any of ITO, IZO or IGO and arranged in
11 opposed relation to said pixel electrode,
12 a counter voltage line connected to said counter electrode,
13 wherein said counter voltage line comprising a triple-layered structure
14 including an alumina first layer, a high-melting point metal second layer, and a third
15 layer of aluminum or an alloy comprising essentially aluminum,
16 said high-melting point metal second layer connected to said counter
17 electrode through an opening in said alumina first layer.

1 20. The liquid crystal display device according to claim 19 wherein
2 said alumina first layer and said high-melting point metal second layer are formed on
3 said third layer, and
4 said high-melting point metal second layer formed through said
5 alumina layer from a surface side of a portion of said alumina layer to said third layer,
6 and connected to said counter electrode.